

Remarks

Drawings

Examiner has stated that the drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference sign not mentioned in the description: 4 (FIGS. 1-3). In response, Applicant submits that the reference sign 4 is mentioned with reference to FIG. 1 on page 2, five lines from the end of the page. With regards to FIGS. 2 and 3, Applicant has submitted substitute figures in which the reference sign 4 has been removed.

Examiner has stated that the drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference signs mentioned in the description: 14 and 16. In response, Applicant has submitted substitute FIGS. 2 and 3 that include the reference signs 14 and 16.

Specification

Examiner has stated

(t)he following informalities in the specification are noted: (A) on page 4, lines 13, 16 and 17, "11" should read - - 12 - -.; (B) on line 16 of page 4 and line 28 of page 5, "Spa" should read - - spa - -; (C) on page 6, line 7, - - to - - should be inserted before "account"; and (D) on page 11, line 2, "for maintaining" should read - - maintains - -.

In response, Applicant has amended the specification accordingly.

Claim Objections

Examiner has stated that "(c)laims 6 and 12 are objected to because of the flowwing informalities: these claims are redundant since they both depend from claim 1." In response, Applicant has amended Claim 6 to depend from Claim 5 and Claim 12 to depend from Claim 11.

Claim Rejections – 35 USC 112

Examiner has stated,

(c)laims 6, 11 and 12 are rejected under 35 USC 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In response Applicant has appropriately amended Claims 6, 11, and 12.

Claim Rejections – 35 USC 103(a)

Tompkins v. Dundas

Examiner has rejected Claims 1 – 12 under 35 USC 103(a) as being unpatentable over Tompkins (5,559,720) in view of Dundas (4,189,791). Specifically, Examiner states,

Although Tompkins et al. use water temperature sensor 21 as well as other water sensors to operate the freeze control system, attention is directed to Dundas who discloses another freeze control system for a spa or pool that uses both a water temperature sensor and an ambient air temperature sensor to activate the control system in order to heat the pool using minimal energy with less waste and expense. It would have been obvious to one of ordinary skill in the spa/pool art, at the time the invention was made, to use an ambient air temperature sensor in conjunction with the water temperature sensor in the control system of Tompkins et al. in view of the teachings of Dundas in order to more effectively operate the control system using minimal energy and less waste and expense.

In response, Applicant respectfully asserts that it would not have been obvious to combine the teachings of Dundas with Tompkins. It would not make sense to use Dundas' device to heat a spa. Indeed, although Examiner states Dundas "...discloses another freeze control system for a spa or pool...", the word 'spa' is never mentioned in Dundas. Nowhere, does Dundas even hint that his device would work for a spa. Applicant's invention is for maintaining the temperature of the water inside the spa and the spa's associated piping above the freezing level. Dundas' device is for heating a pool that is already well above the freezing level using ambient outside air that is even warmer. (See the example in Dundas, column 3, lines 25 – 42 in which the operator has set the first control 31 at 75 degrees F and the second control 32 at 70 degrees F.) In situations involving a spa in which one has to be concerned about freezing, the outside ambient air temperature is usually colder or at least as cold as the temperature of the spa water. Therefore, to use Dundas' device to pump ambient air through a spa would do nothing to protect the spa from freezing. In fact, it would make the water even colder.

Dundas is concerned with heating a swimming pool inexpensively by using very warm ambient outside air as a source of free heat. In sharp contrast, Applicant is concerned with protecting the spa and the spa's associated piping from freezing. Applicant and Dundas both employ ambient air sensors, but in very different ways for very different purposes. Applicant respectfully suggests that it is unreasonable to assert that merely because Dundas uses a air temperature sensor as part of his invention for pool heating, that Dundas can be rightfully combined with Tompkins to support a rejection under 35 USC 103(a). However, to even further distinguish Applicant's invention for Tompkins and Dundas, Applicant has amended Claims 1 and 7 to include the express limitation that Applicant's invention is "for maintaining the temperature of the water inside the spa and the spa's associated piping above the freezing level".

Therefore, for the reasons stated above, Claims 1 and 7 as presently amended should be allowable. Furthermore, because Claims 2 – 6 are dependent on Claim 1 and Claims 8 – 12 are dependent on Claim 7, they should be allowable as well.

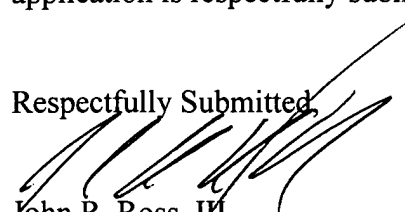
Prior Art Made of Record

Applicant has reviewed the prior art made of record and not relied upon and Applicant submits that that prior art does not disclose or suggest the novel features of the present invention as claimed in the claims as amended.

CONCLUSION

Thus, for all the reasons given above, this application, as the claims are presently limited, define a novel, patentable, and truly valuable invention. Hence allowance of this application is respectfully submitted to be proper and is respectfully solicited.

Respectfully Submitted,



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